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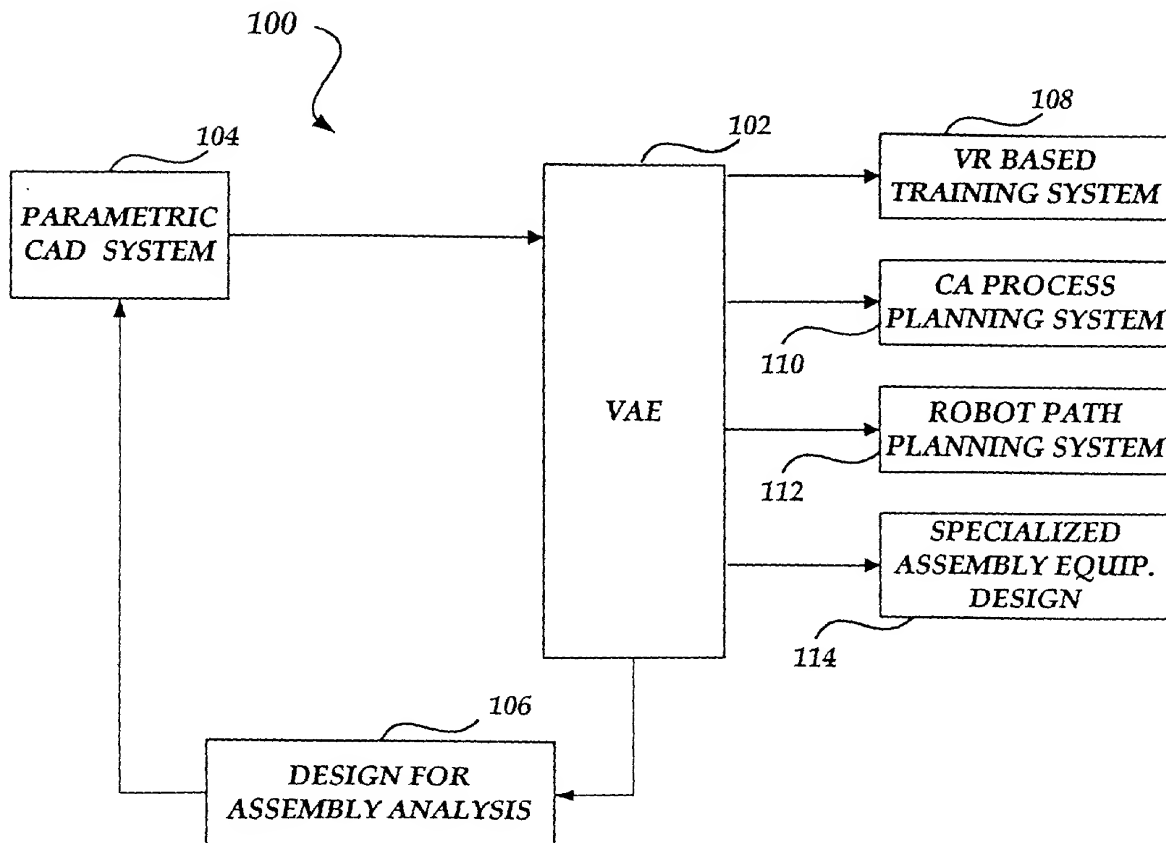


FIG. 1

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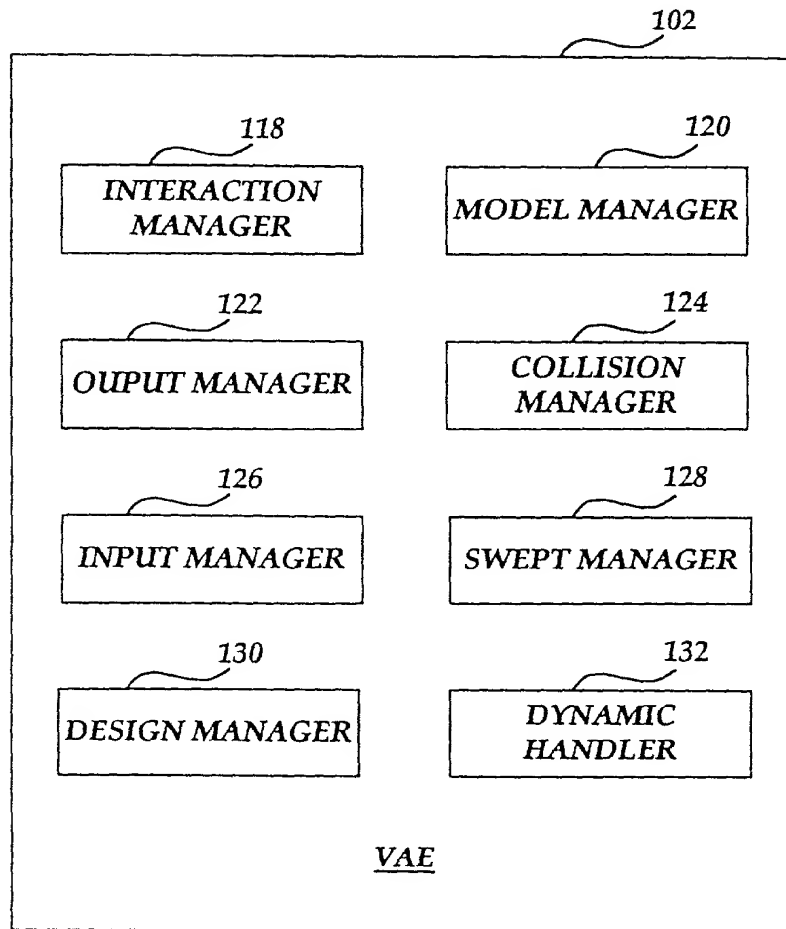


FIG. 2

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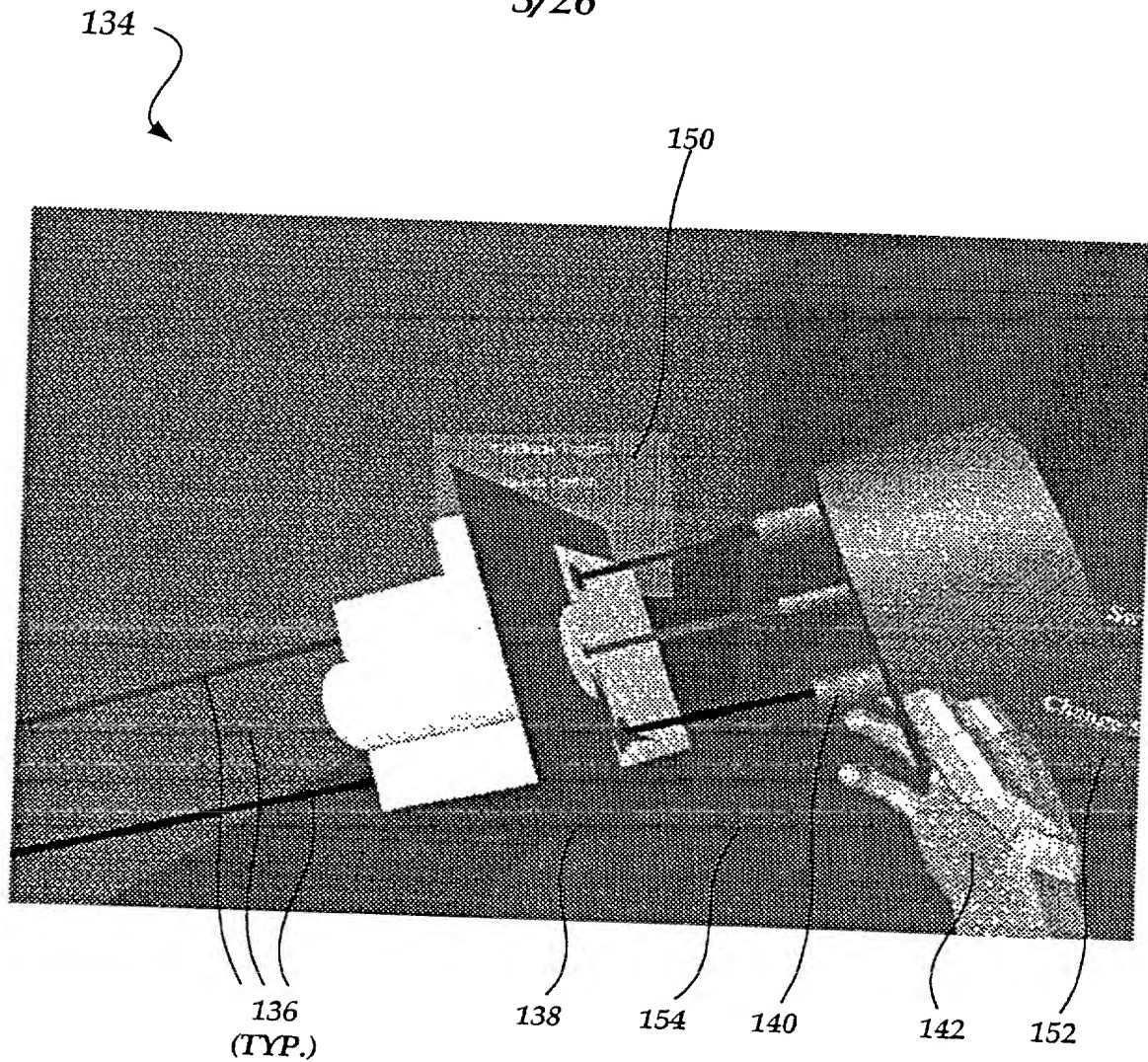


FIG. 3

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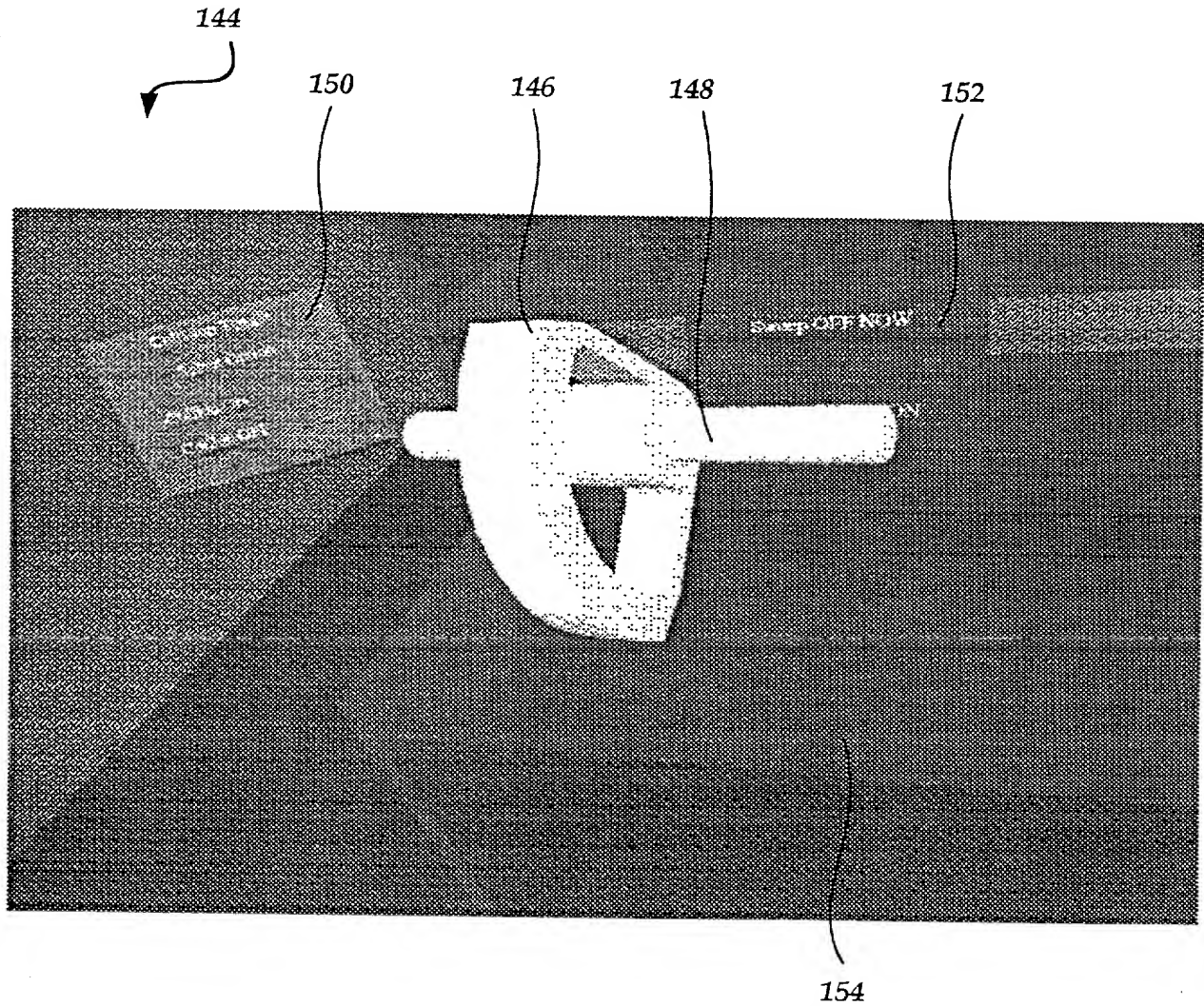


FIG. 4

Title: VIRTUAL ASSEMBLY DESIGN ENVIRONMENT
(VADE)
Inventors: S. Jayaram et al.
Docket No.: WSUR117441
EXPRESS MAIL NO.: EL742878527US

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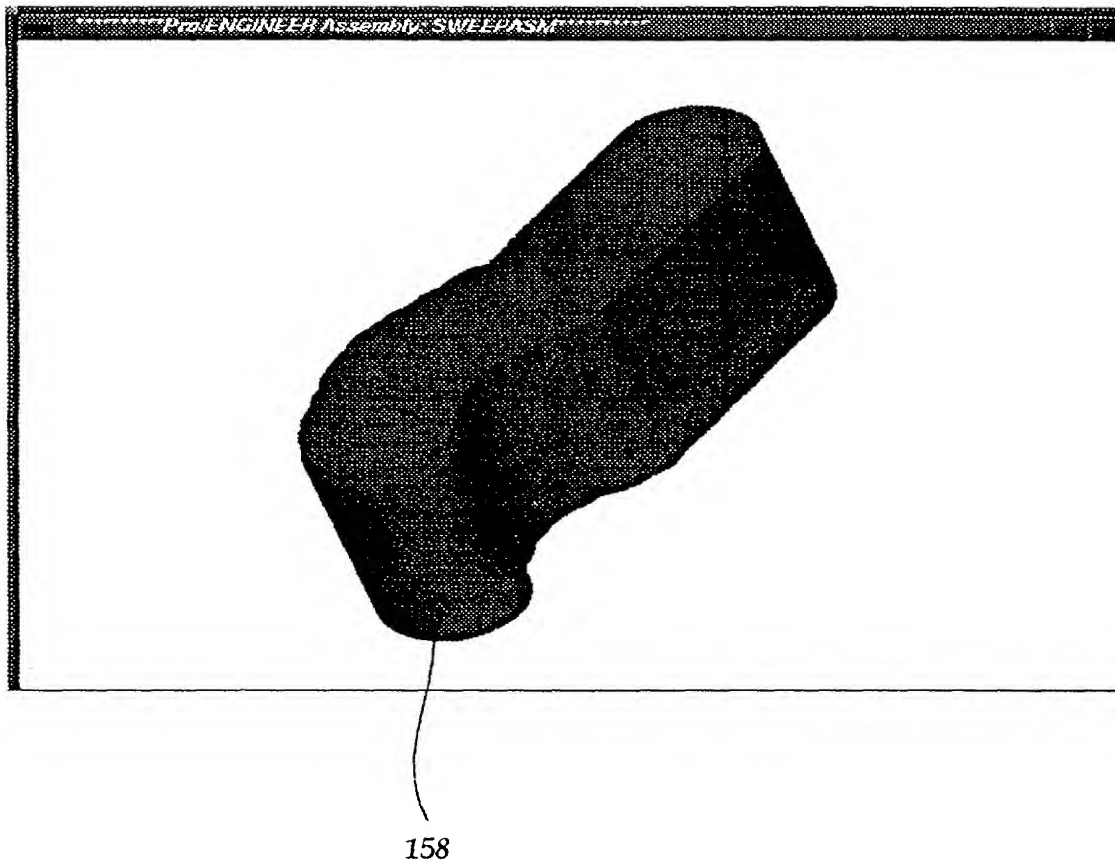

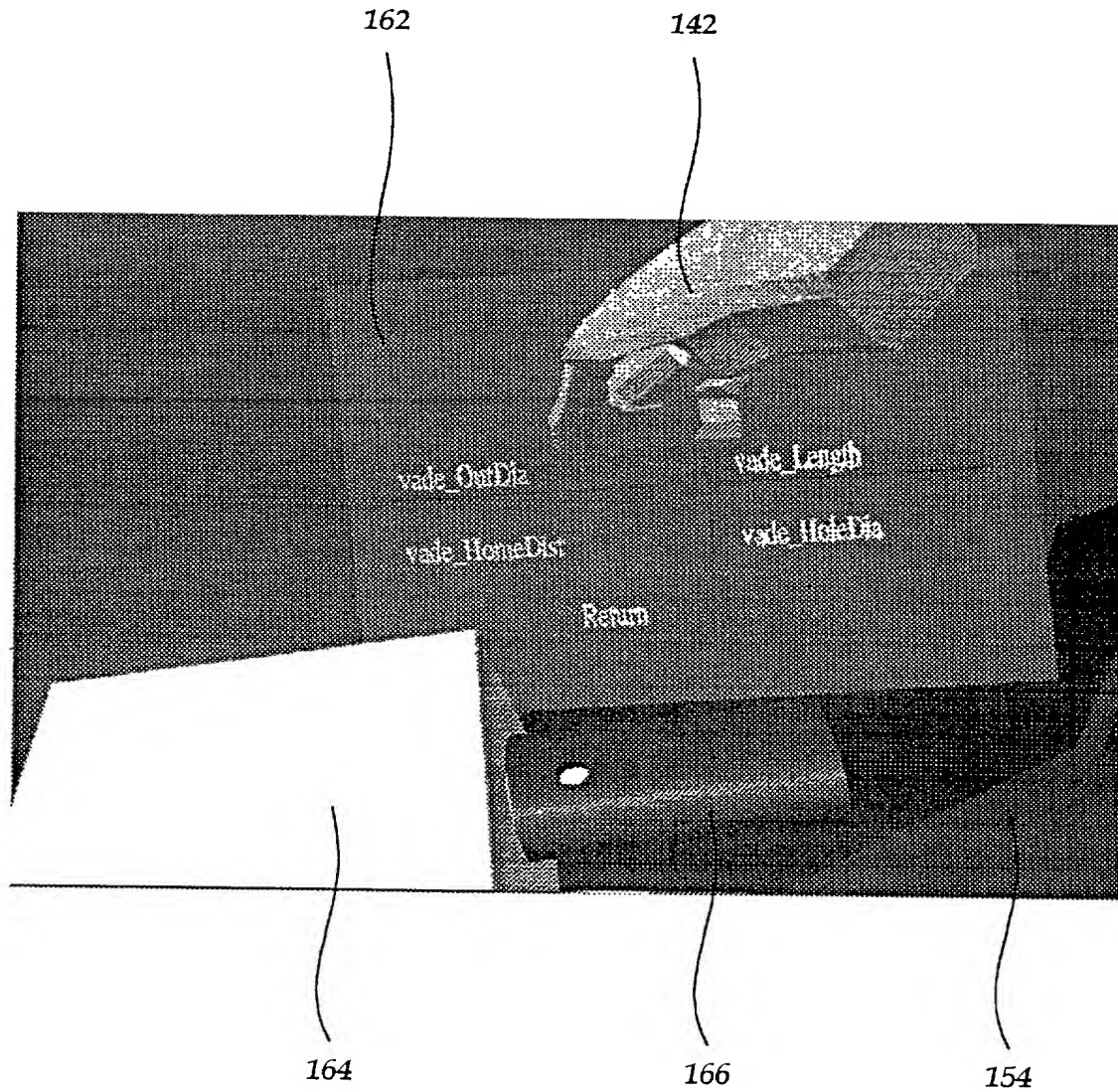


FIG. 5

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Title: VIRTUAL ASSEMBLY DESIGN ENVIRONMENT
(VADE)

Inventors: S. Jayaram et al.

Docket No.: WSUR117441

EXPRESS MAIL NO.: EL742878527US

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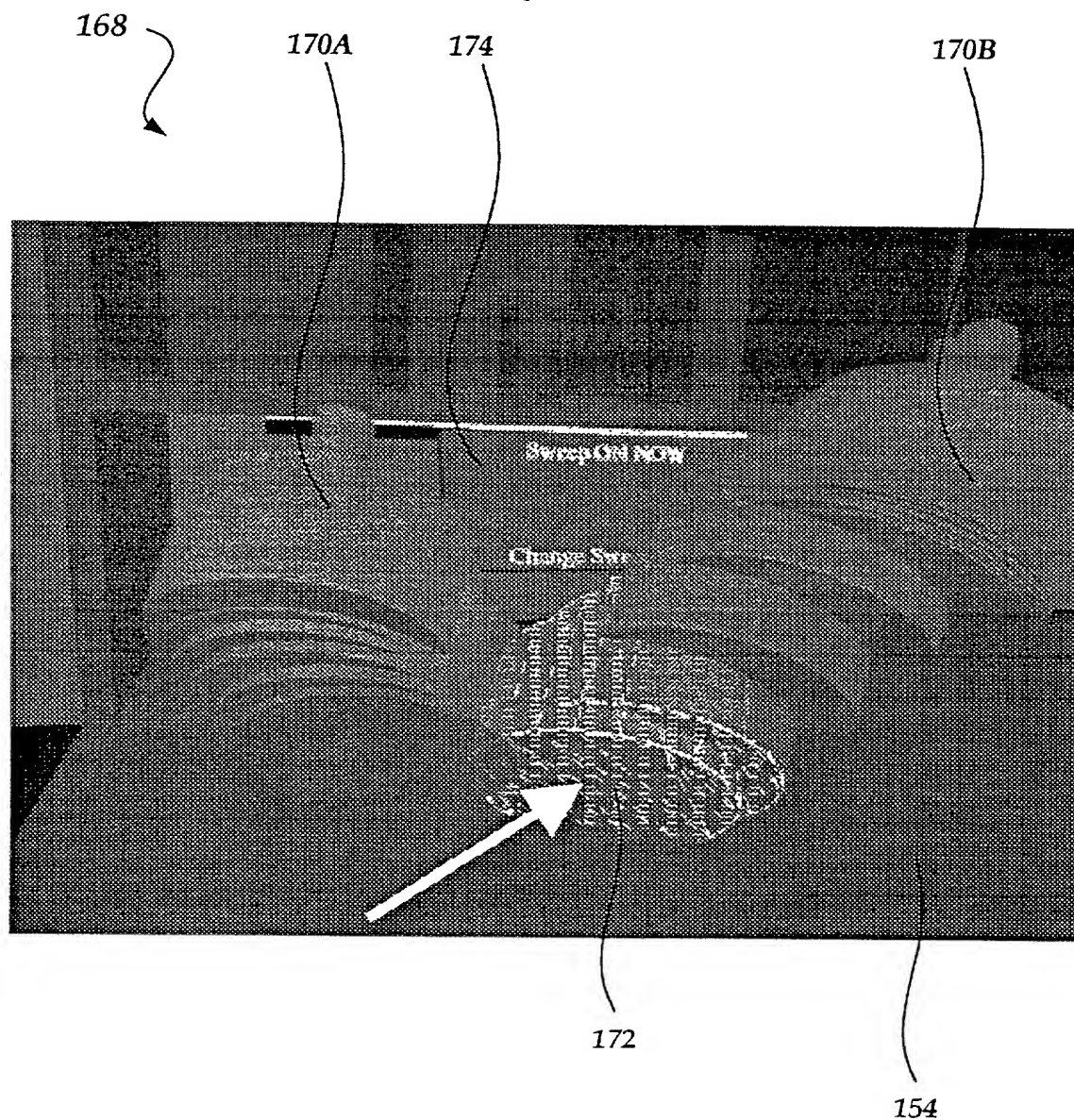


FIG. 7

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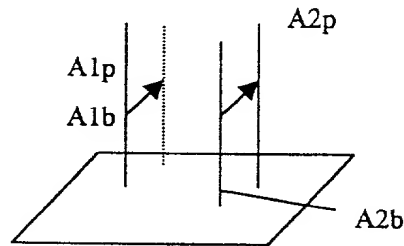


FIG. 8

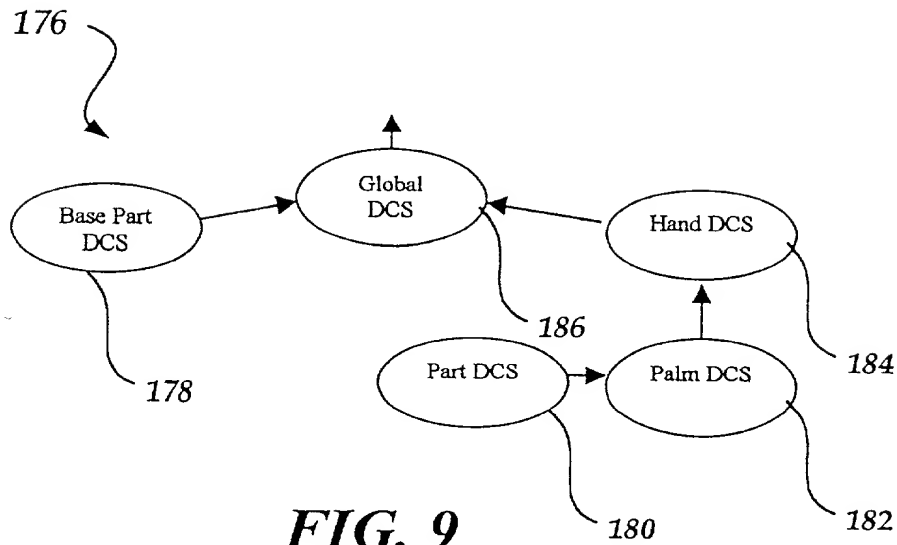


FIG. 9

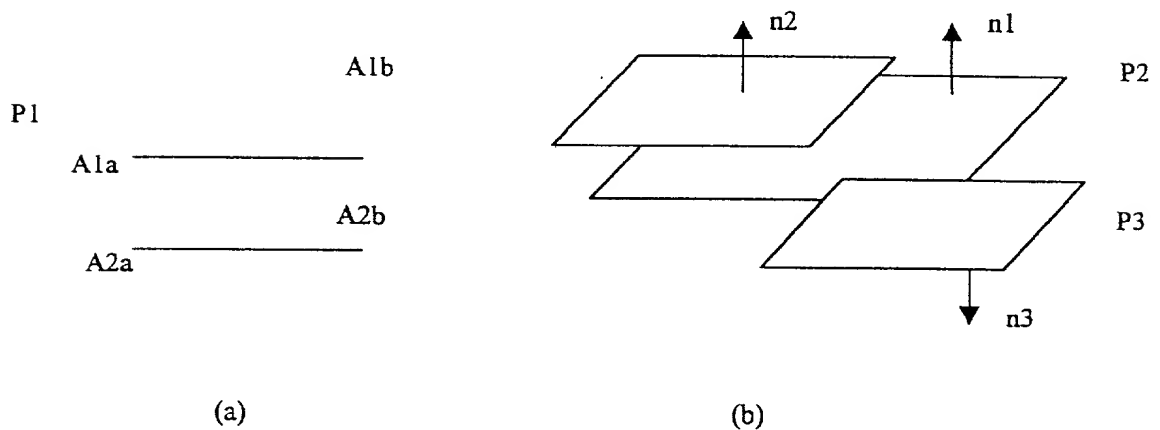


FIG. 10

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FIG. 11

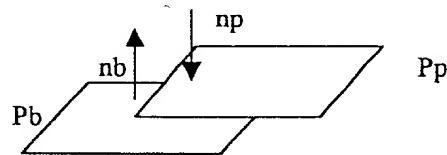


FIG. 12

Combination and order	Conditions
A1, A2	$A1 \nparallel A2$
A1, A2, A3	$A1 \parallel A2, A1 \nparallel A3$
A1, A2, P3	$A1 \parallel A2, A1 \nparallel P3$
A1, P2	$A1 \nparallel P2, A1 \perp P2$
A1, P2, A3	$A1 \parallel P2, A1 \nparallel A3$
A1, P2, P3	$A1 \parallel P2, A1 \nparallel P3$
A1, P2, A3	$A1 \perp P2, A3$ any case
A1, P2, P3	$A1 \perp P2, P2 \nparallel P3$
P1, A2	$P1 \nparallel A2, P1 \perp A2$
P1, A2, A3	$P1 \parallel A2, A2 \nparallel A3$
P1, A2, P3	$P1 \parallel A2, A2 \nparallel P3$
P1, A2, A3	$P1 \perp A2, A3$ any case
P1, A2, P3	$P1 \perp A1, P1 \nparallel P3$
P1, P2, A3	$P1 \nparallel P2, (\text{intersection line of } P1, P2) \nparallel A3$
P1, P2, P3	$P1 \nparallel P2, P1 \nparallel P3, P2 \nparallel P3$

FIG. 13

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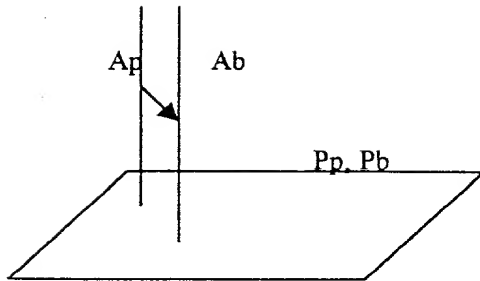


FIG. 14

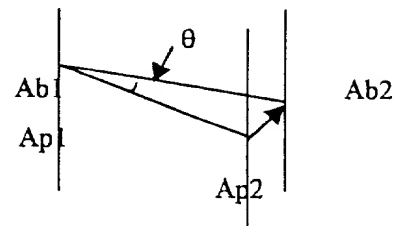


FIG. 15

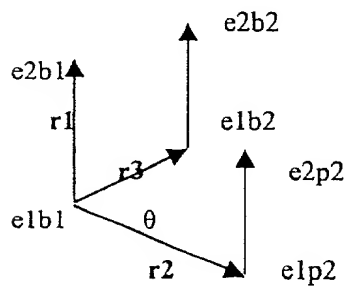


FIG. 16

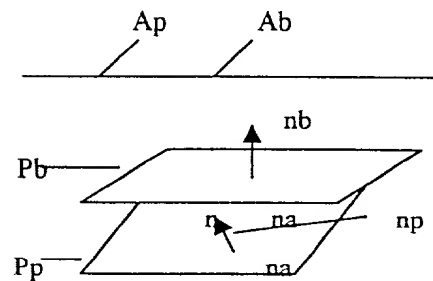


FIG. 17

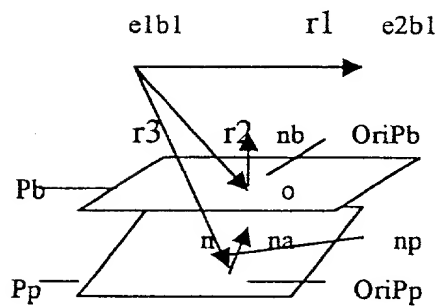


FIG. 18

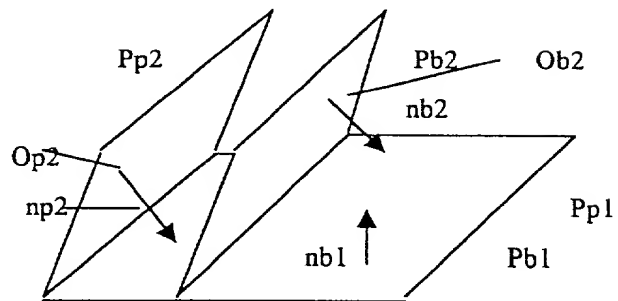


FIG. 19

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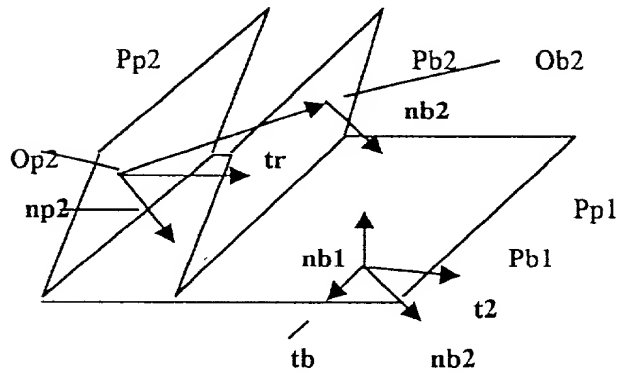


FIG. 20

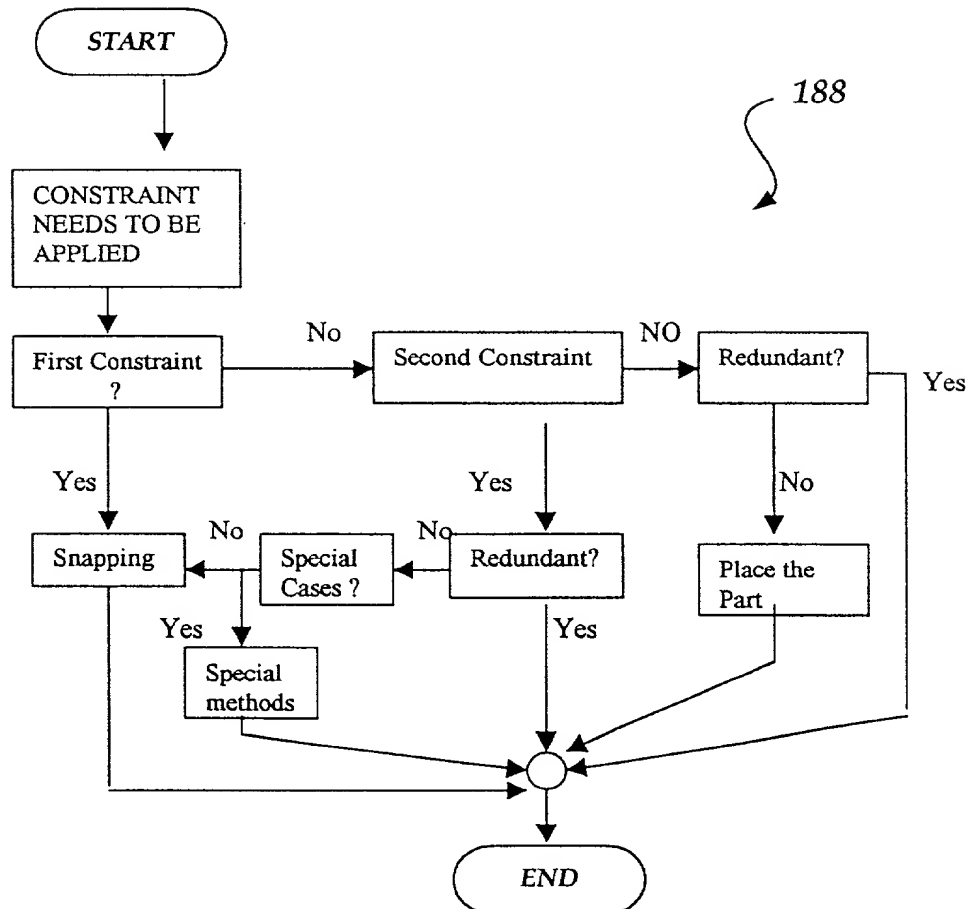


FIG. 21

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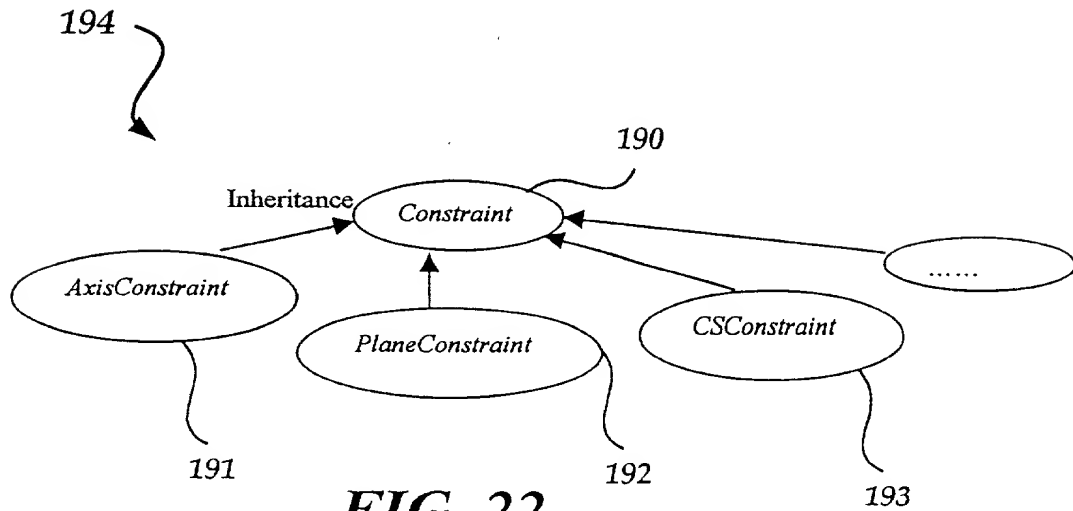


FIG. 22

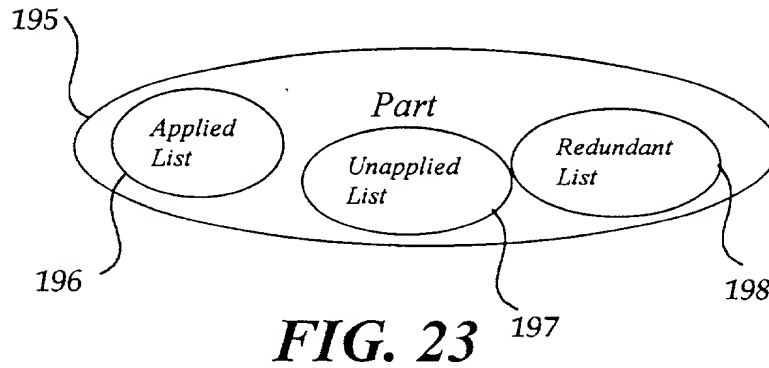


FIG. 23

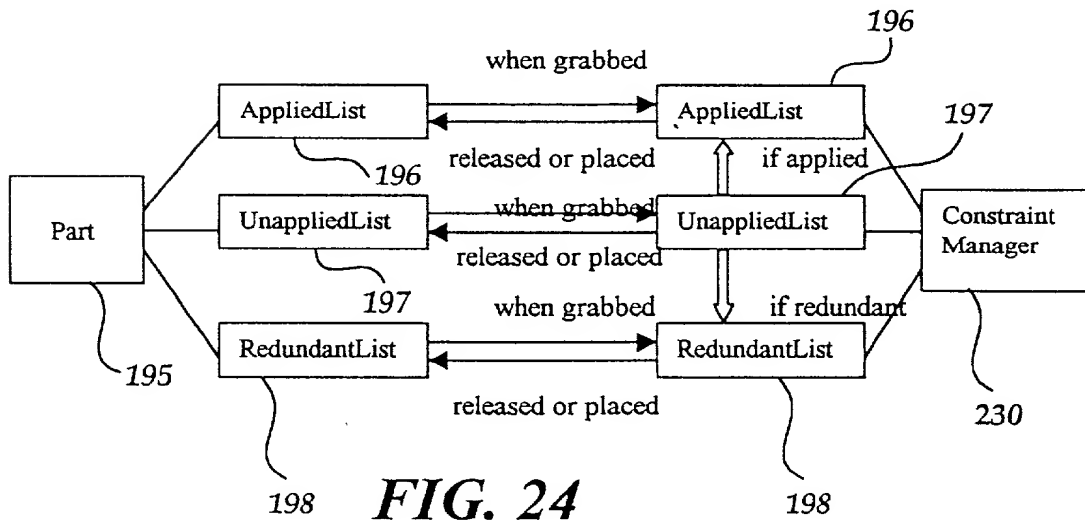


FIG. 24

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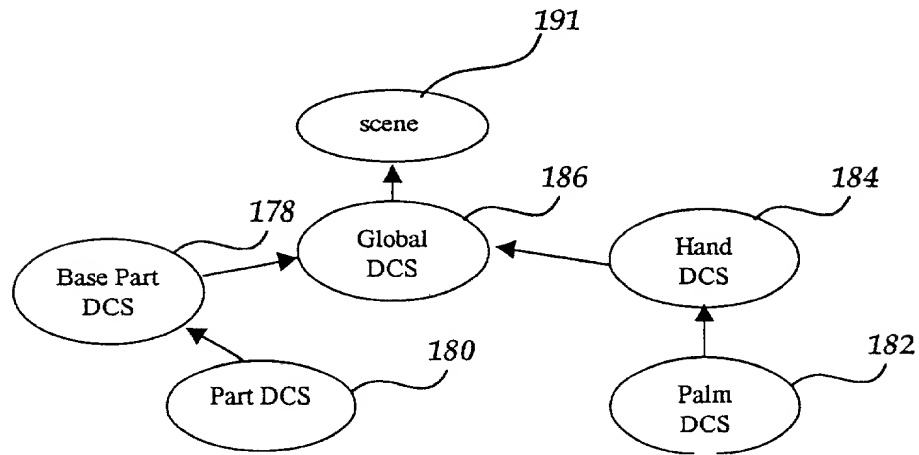


Fig. 25

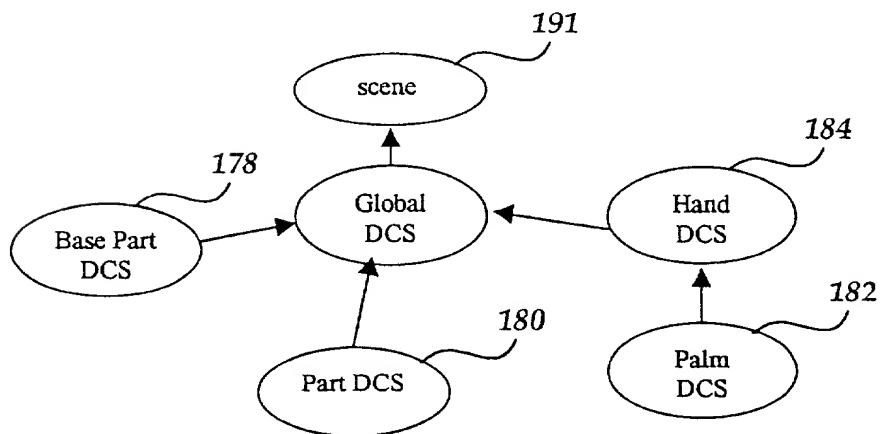


Fig. 26

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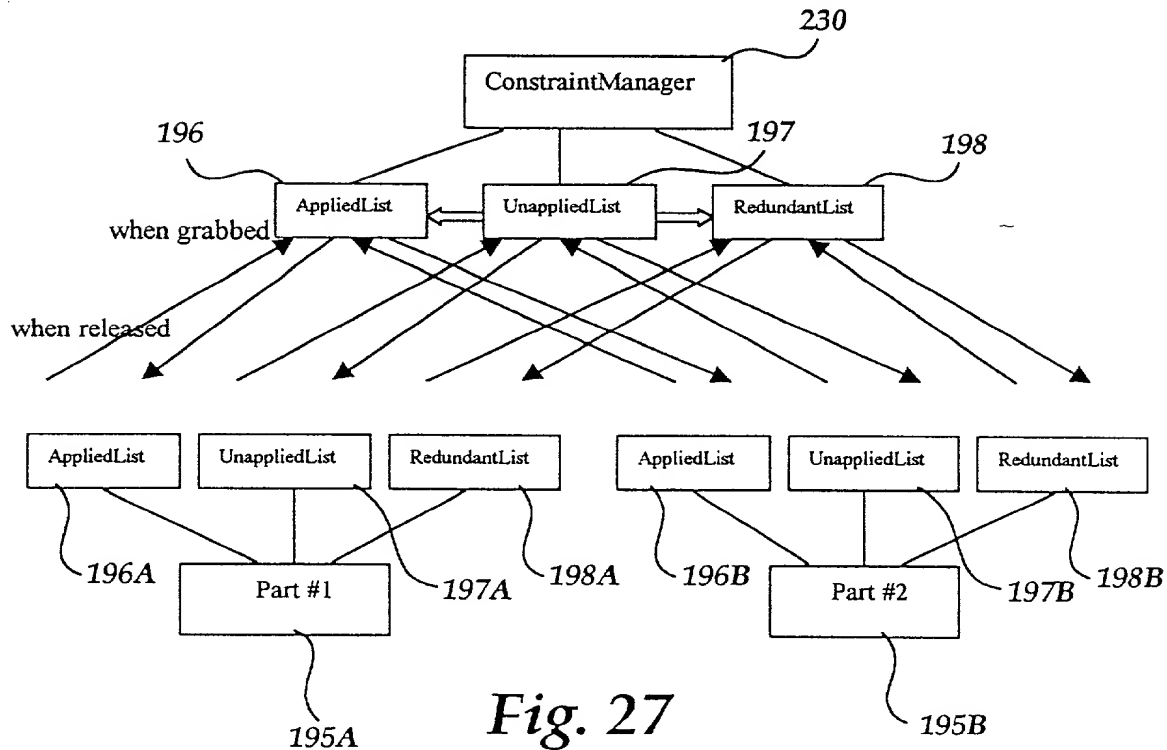


Fig. 27

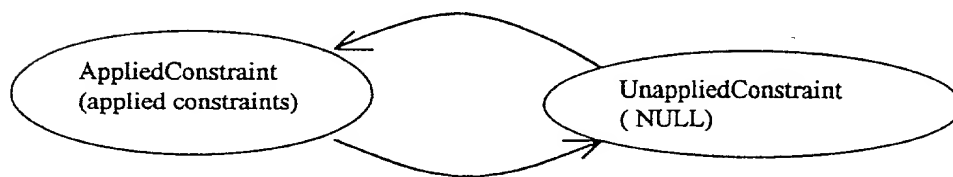


Fig. 28

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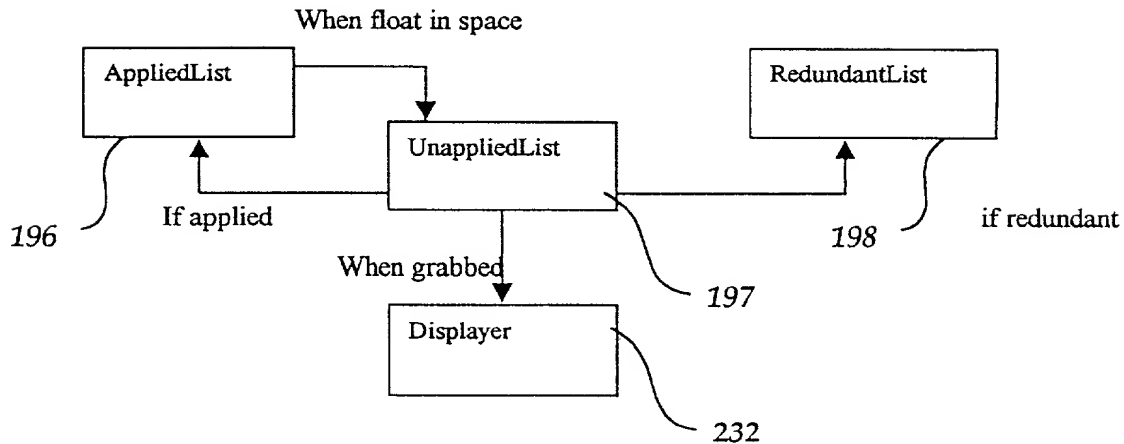


Fig. 29

crank property file

LENGTH UNITS: Inch
MASS UNITS: Pound
Surface Finish: 0.001000
Default Linear Tolerances: +- 0.100000 +- 0.010000 +- 0.001000
Default Angular Tolerances: ANG+- 0.500000
Volume: 12.6798973
Surface Area: 69.5717665
Density: 1.0000000
Mass: 12.6798973

CENTER OF GRAVITY wrt DefaultCSC0 coordinate frame: X Y Z
0.0000000 1.1668295 0.5907307

INERTIA wrt DefaultCSC0 coordinate frame:

INERTIA TENSOR:

Ixx Ixy Ixz	69.0504703	-0.0536521	0.0000182
Iyx Iyy Izz	-0.0536521	17.8369050	-3.1957782
Izx Izy Izz	0.0000182	-3.1957782	68.8163268

INERTIA at CENTER OF GRAVITY wpt (Axis aligned) DefaultCSC0 coordinate frame:

INERTIA TENSOR:

Ixx Ixy Ixz	47.3620913	-0.0536521	0.0000182
Iyx Iyy Izz	-0.0536521	13.4120927	5.5442472
Izx Izy Izz	0.0000182	5.5442472	51.5527601

PRINCIPAL MOMENTS OF INERTIA(wrt MC):

I1 I2 I3	12.6224281	47.3621611	52.3423549
----------	------------	------------	------------

ROTATION MATRIX from DefaultCSC0 orientation to PRINCIPAL AXES:

0.0015290	-0.9999977	-0.0015153
0.9900096	0.0013001	0.1409941
-0.1409918	-0.0017157	0.9900093

Fig. 30

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Lifting Capacity for infrequent movement and short distances (pounds)		
	Men	Women
1. Both hands in front Or one hand at side	60	40
2. Both hands 20 inches in front	20	13.3
3. Each hand at side	30	20
3. One hand or each 5 inch out	35	23.3

Fig. 31

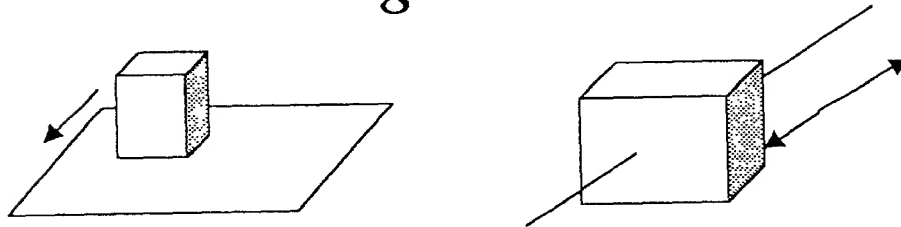


Fig. 32

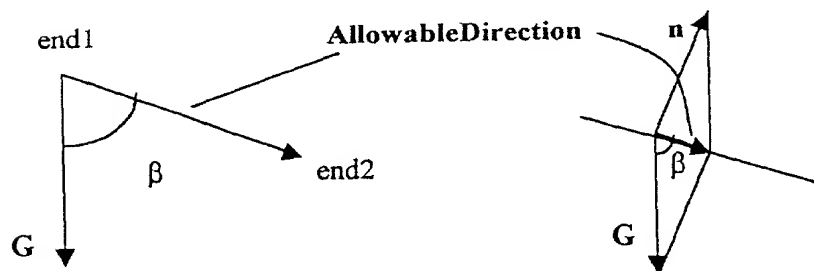


Fig. 33

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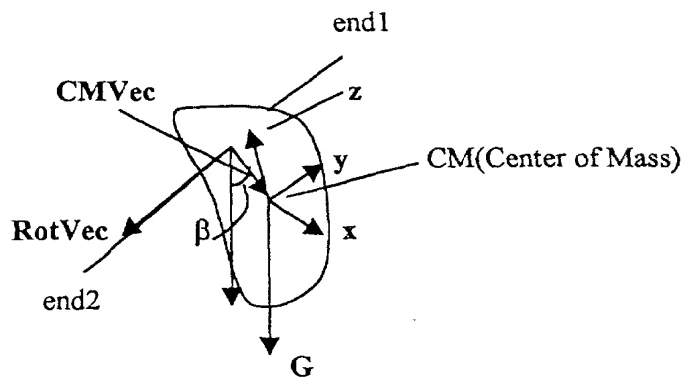


Fig. 34

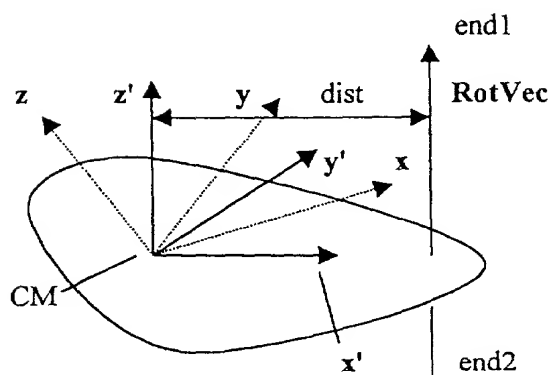


Fig. 35

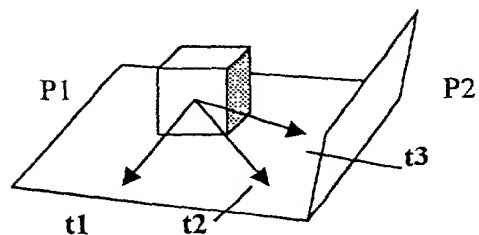


Fig. 36

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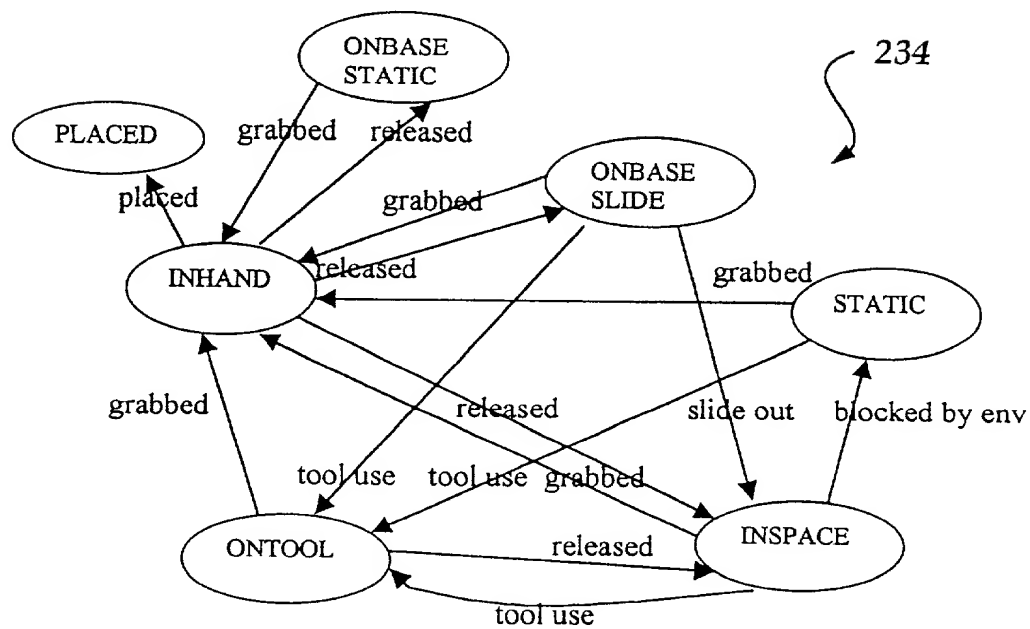


Fig. 37

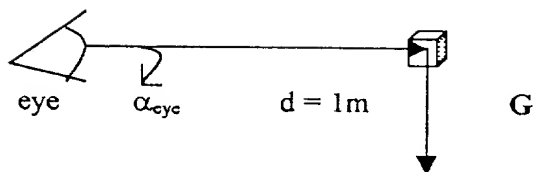


Fig. 38

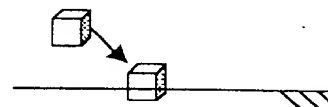


Fig. 39

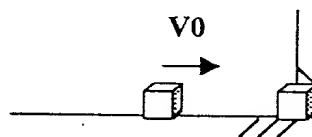


Fig. 40

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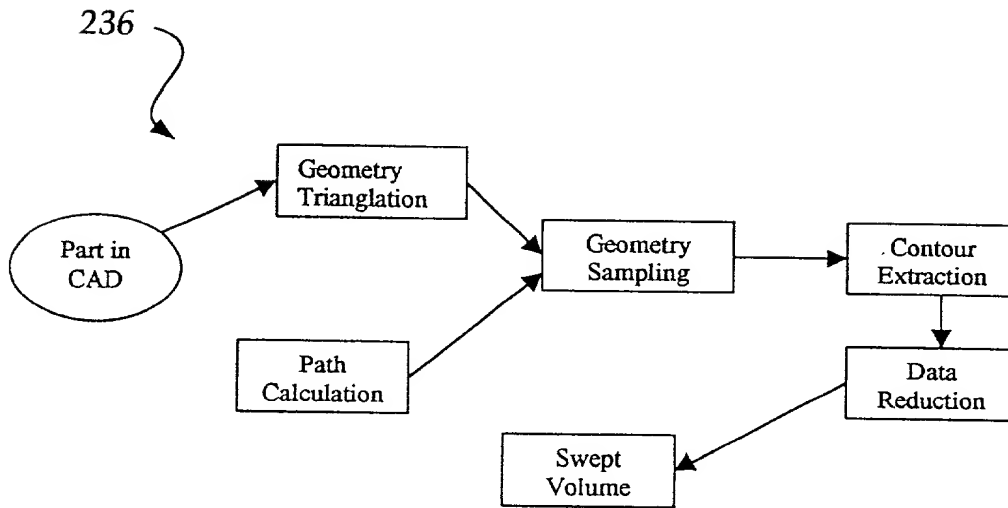


Fig. 41

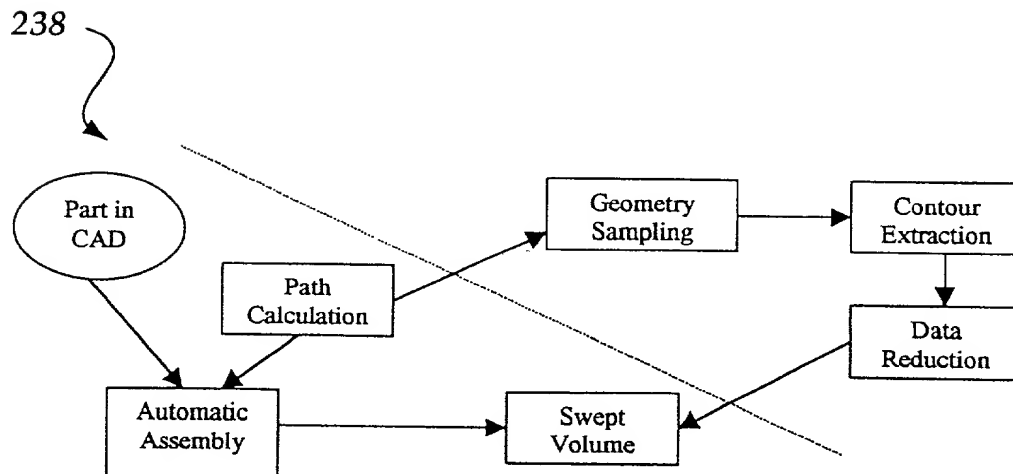


Fig. 42

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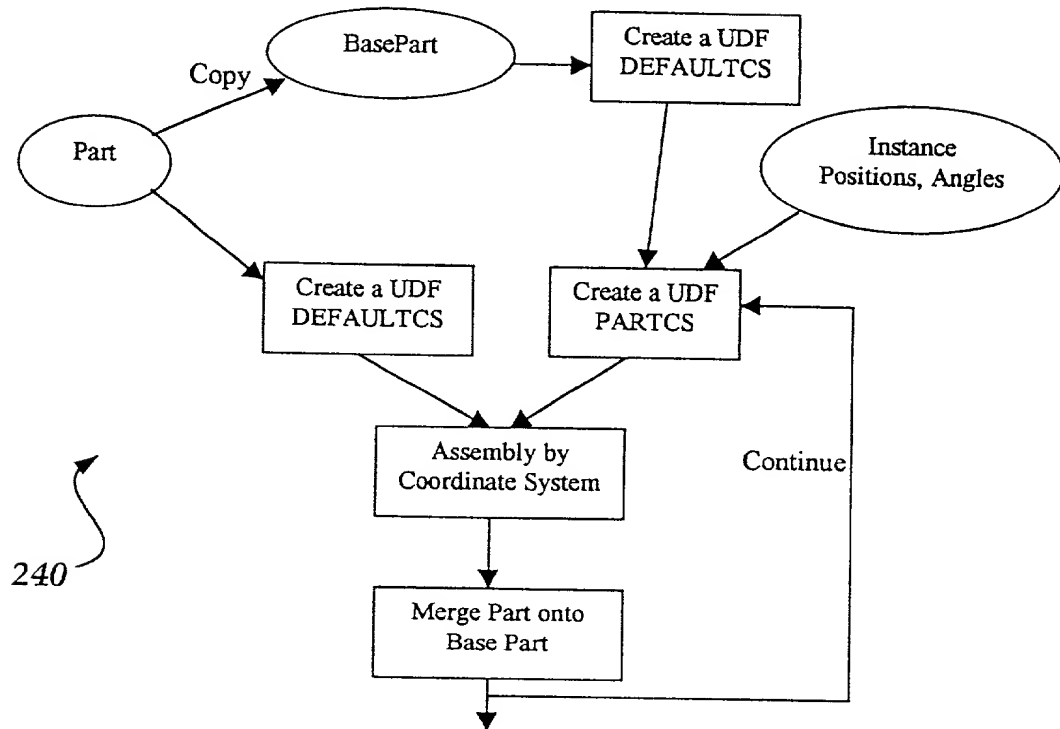


Fig. 43

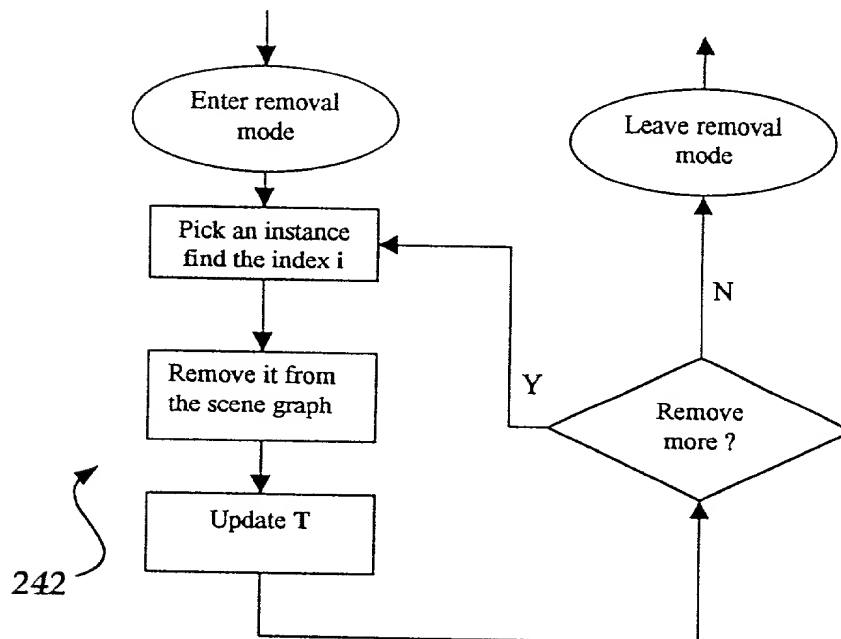


Fig. 44

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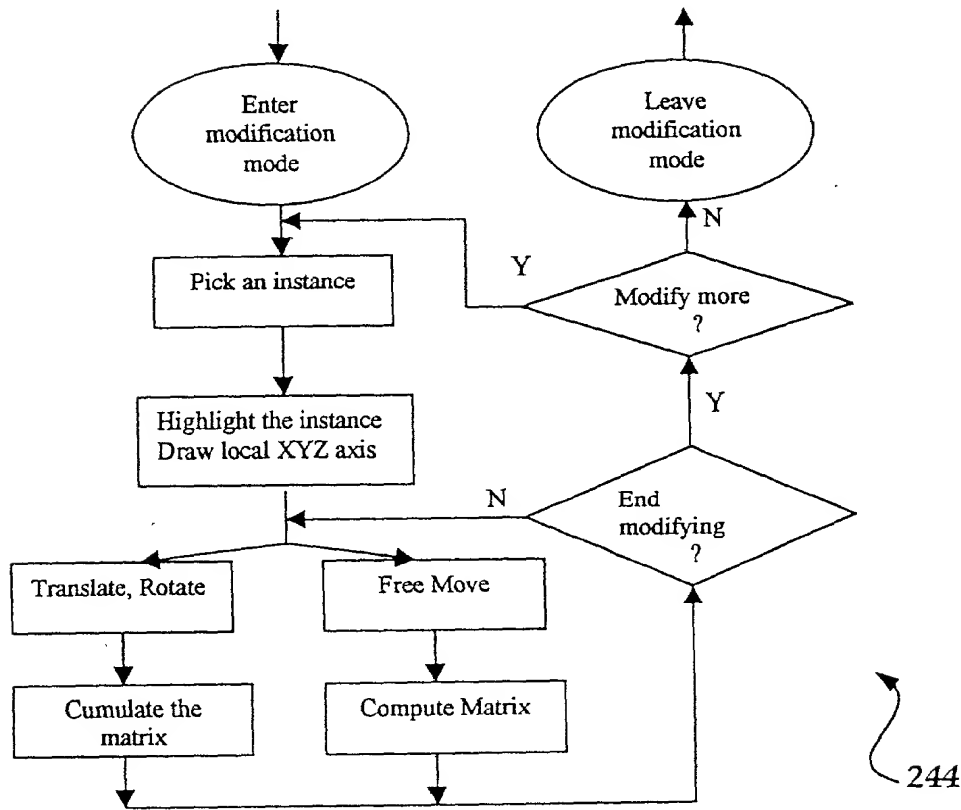


Fig. 45

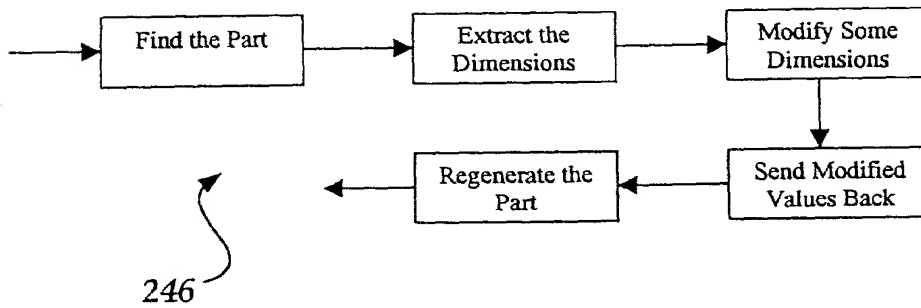
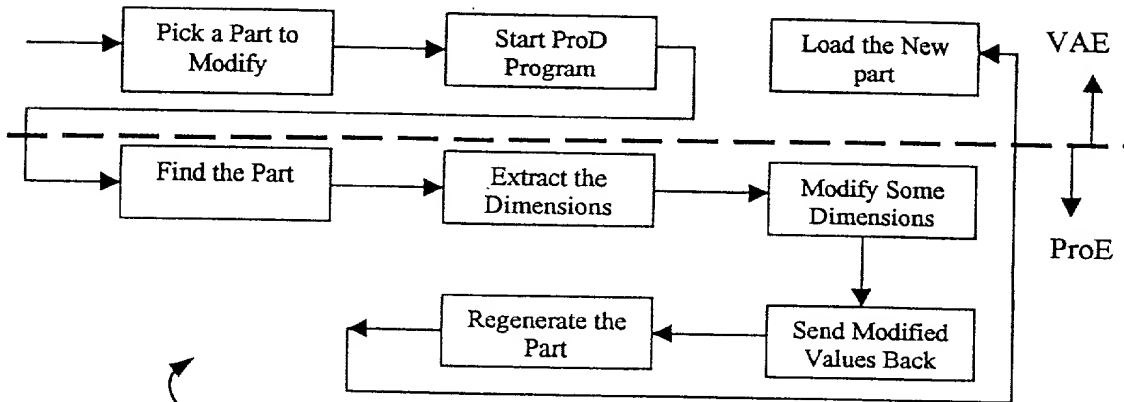


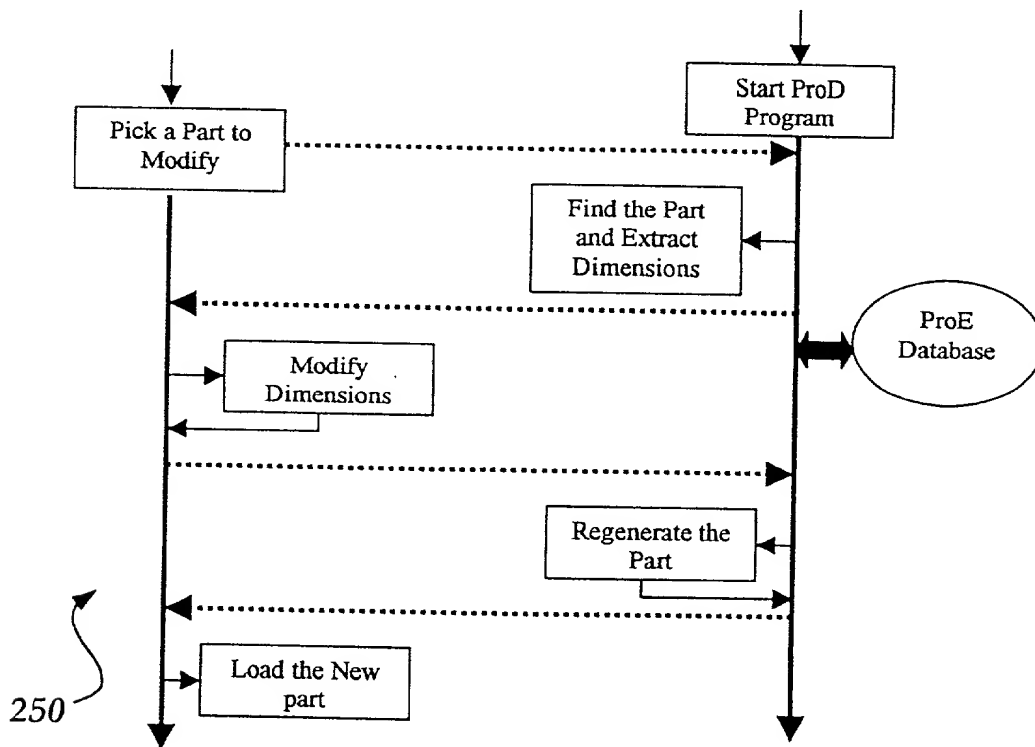
Fig. 46

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Fig. 47



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Fig. 48

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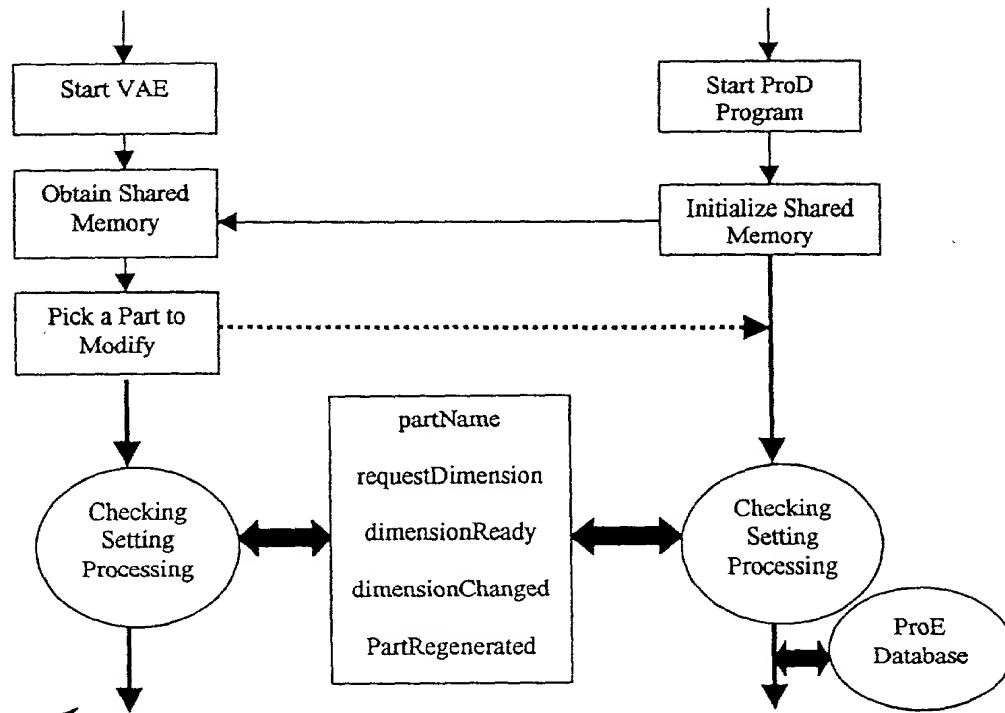


Fig. 49

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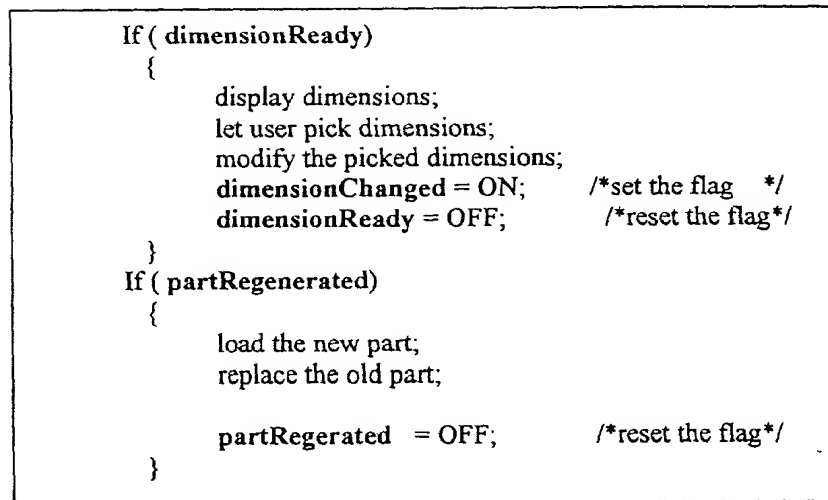


Fig. 50

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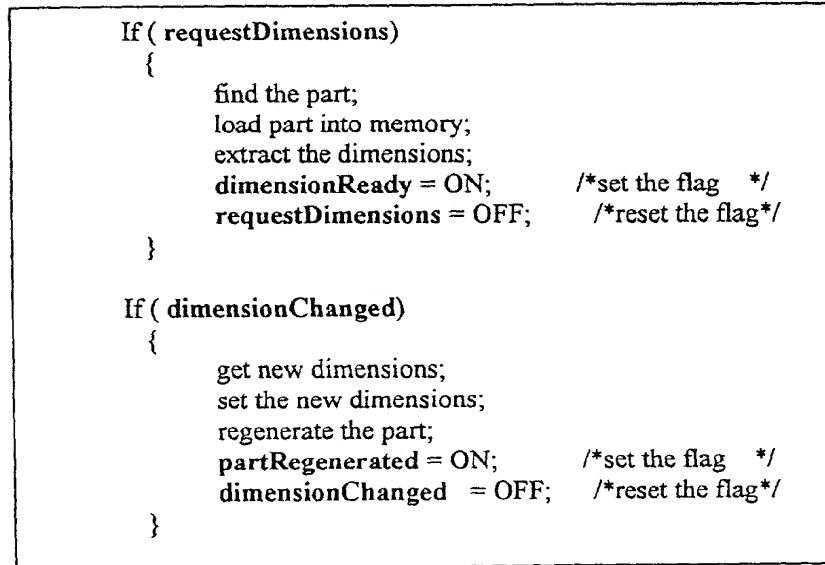


Fig. 51

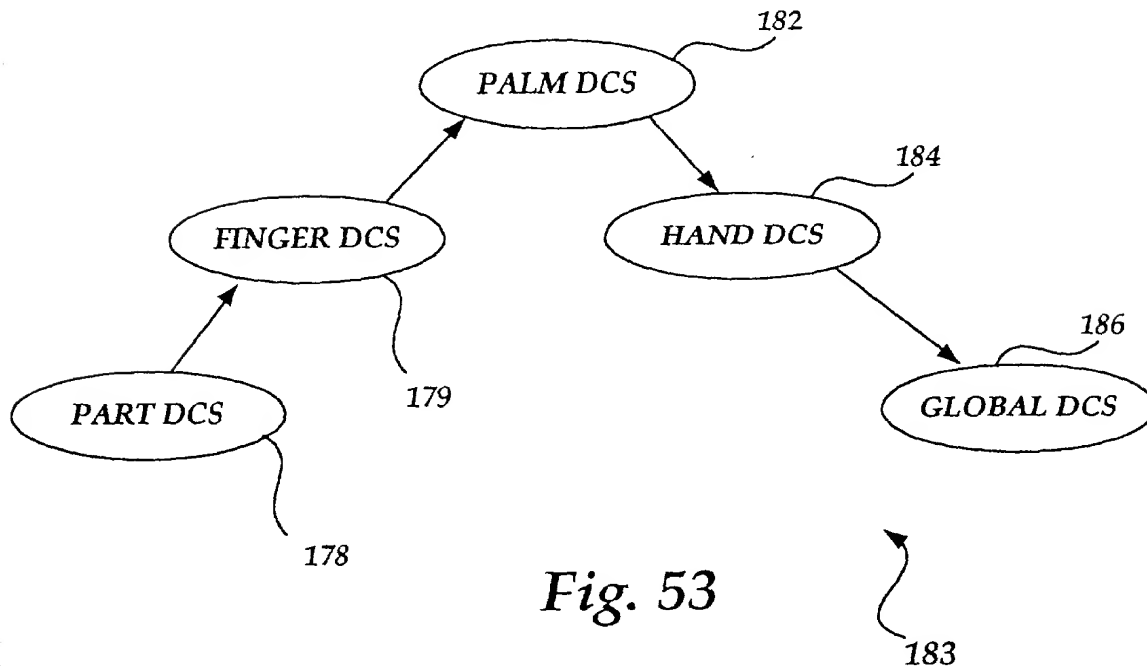


Fig. 53

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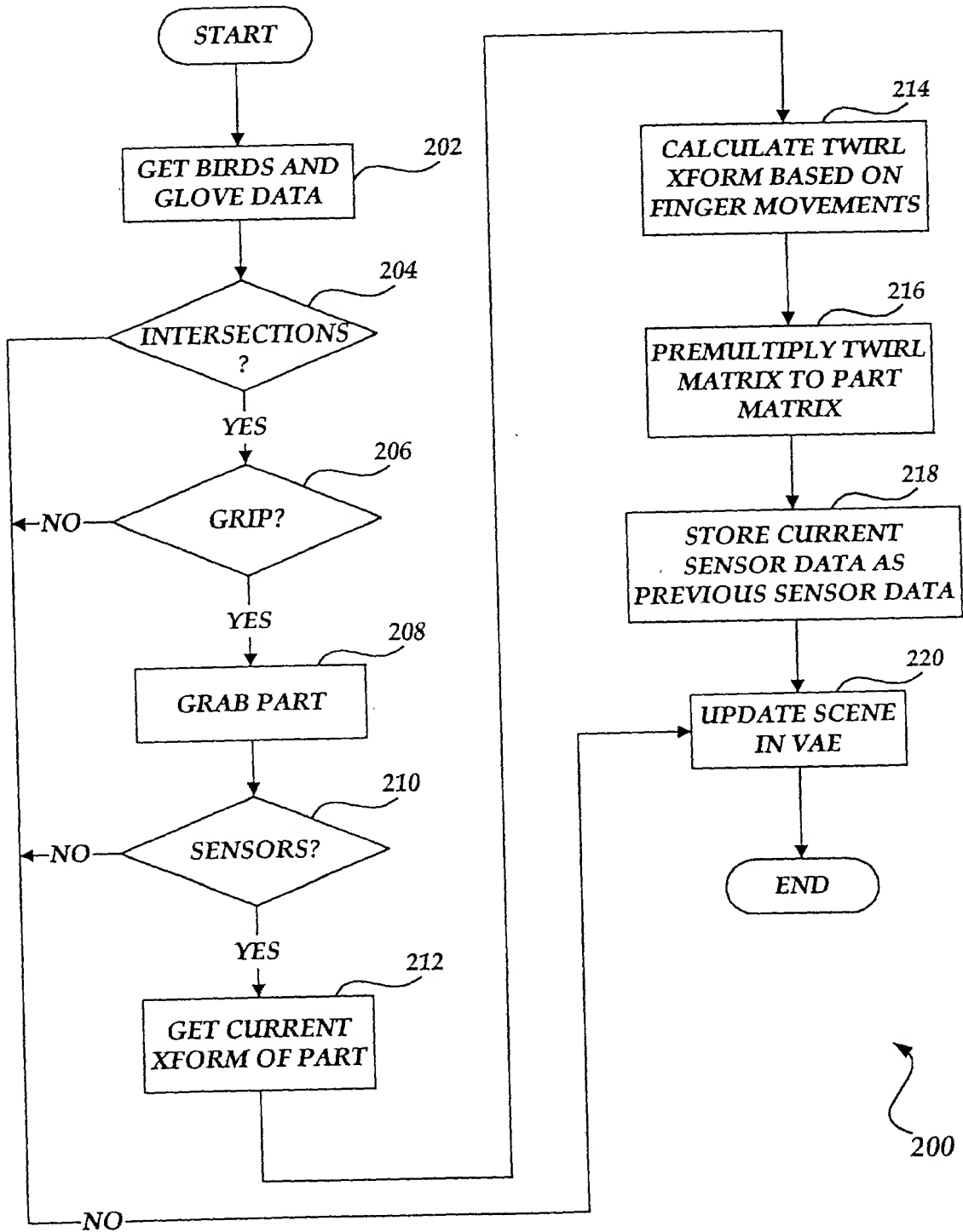


Fig. 52

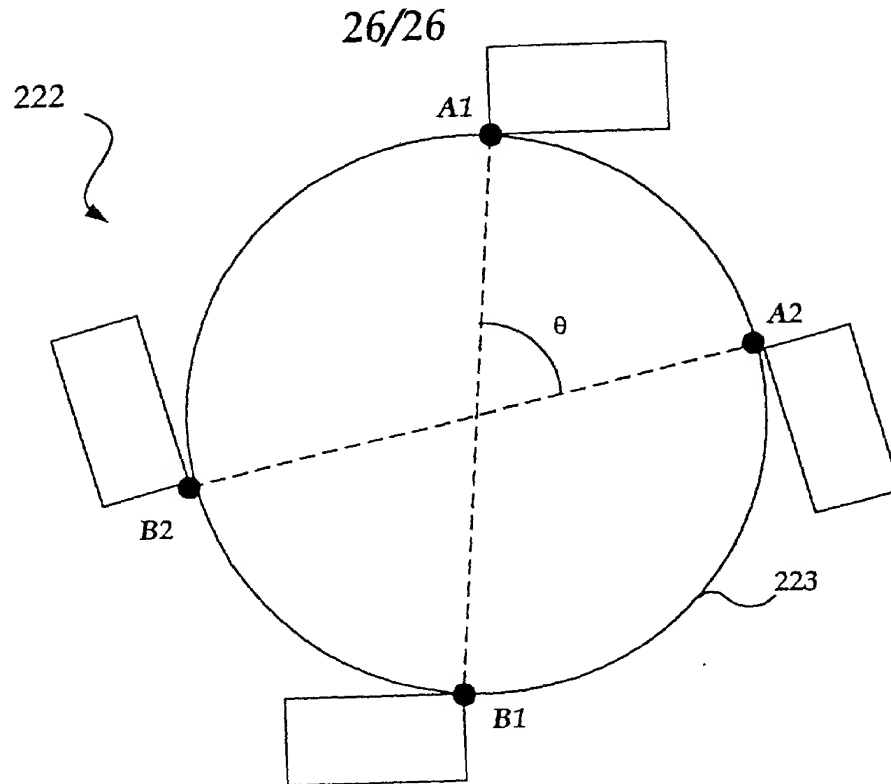


Fig. 54

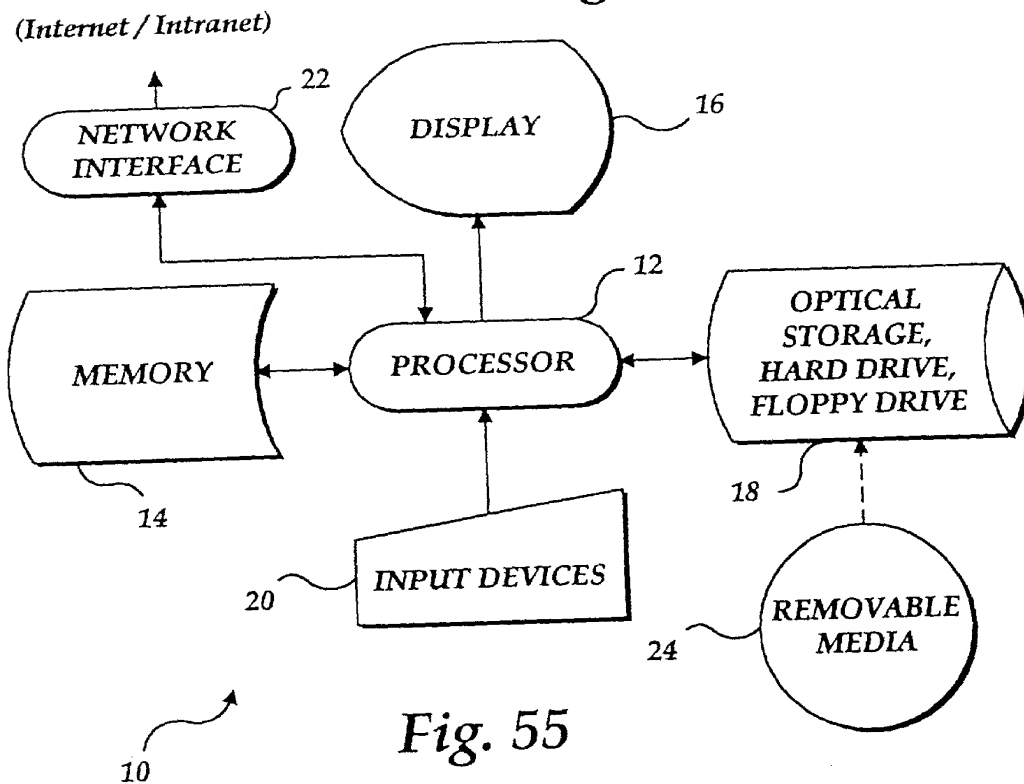


Fig. 55